# General paediatrics outpatient consultation fees, bulk billing rates and service use patterns in Australia

Gary L. Freed,<sup>1,2</sup> Amy R. Allen<sup>1,3</sup>

n Australia, general paediatricians are medical specialists who provide ambulatory and hospital care to children. Children can access these doctors either via the free public health system in the outpatient clinics of public hospitals or community health centres, or via the private system. Some patients may choose to pursue care in the private system because they wish to select their own doctor or because of potentially long waiting times in the public sector.<sup>1,2</sup>

In the private sector, a medical specialist can elect to receive the Medicare benefit amount as full payment, a process known as 'bulk billing' that results in no cost to the patient.<sup>3</sup> The benefit amount is based on the 'schedule fee', an amount set by the Federal Government as representative of average reasonable fees for the service rendered.<sup>3</sup> Alternatively, the specialist can charge a consultation fee higher than the schedule fee.<sup>4</sup> In these instances, the patient is responsible for paying any difference between the consultation fee and the Medicare benefit amount, known as an 'out-of-pocket' expense<sup>4,5</sup> or 'gap fee'.

Out-of-pocket expenses may present an economic barrier for some families in accessing private physicians and/or timely care. Concerns have been raised by the media and professional groups (including the Royal Australian College of Surgeons) about high medical specialist fees and the limited ability of many Australians to afford such care. In contrast to inpatient care, private health insurers are legislatively prohibited from covering fees for outpatient medical care. Thus, all outpatient out-of-pocket expenses are the sole responsibility of the patient.

## **Abstract**

**Objective:** To determine: 1) the mean, median and range of fees for initial and subsequent private outpatient consultations with a general paediatrician in Australia; 2) any variation in fees and bulk billing rates between states/territories; and 3) volume of outpatient general paediatric specialist consultations relative to child population.

**Methods:** Analysis of Medicare claims data from the years 2011 and 2014 for initial consultations (items 110 and 132), subsequent consultations (items 116 and 133), and autism or pervasive developmental disorder (PDD) initial consultation (item 135) with a general paediatrician.

Results: Fees for initial and subsequent general paediatric outpatient consultations varied within, and between, states and territories. Fees increased slightly from 2011 to 2014, after accounting for inflation. The volume of consultations relative to child population varied markedly across states and territories, as did bulk billing rates. Use of item codes for patients with multiple morbidities (132 and 133) increased significantly from 2011 to 2014. Autism/PDD consultation service use (item 135) and fees remained relatively stable.

**Conclusions:** There was variation in service use, fees and bulk billing within, and between, states and territories, and across time and consultation types.

**Implications for public health:** Future studies should assess the impact of such variation on access to paediatric services and the relationship, if any, to variation in state investment in public paediatric outpatient services.

Key words: general paediatrics, outpatient, consultation, fee, bulk billing

A recent study found private out-of-pocket costs for an initial consultation with a general paediatrician in Melbourne ranged from \$40 to \$222, averaging \$128.9 Using a 'secret shopper' methodology, this study also found that only five out of the 42 clinics in the study bulk billed for an initial consultation.9

There is a wide variation in the bulk billing rates and fees charged by medical specialists treating adults, including significant variation within specialties and across states/territories. <sup>10</sup> However, there are no analyses of Medicare data exploring these issues in general paediatrics. Understanding variation in fees charged in the provision

of health services will assist paediatricians, policymakers and the public in making evidence-based decisions regarding the Australian health care system, with the goal of increasing access to paediatric care. This study will examine Medicare-funded general paediatrics service usage, bulk billing rates and fees by state/territory, as well as the change in fees across the years 2011–14.

#### **Methods**

This study examined aggregate nonidentifiable Medicare data obtained from the Commonwealth Department of Human Services (DHS). The primary Medicare item

- 1. Centre for Health Policy, University of Melbourne, Victoria
- 2. University of Michigan, USA
- School of Psychological Sciences, Monash University, Victoria

Correspondence to: Professor Gary L. Freed, Centre for Health Policy, University of Melbourne, Parkville, VIC 3010; e-mail: gary.freed@unimelb.edu.au Submitted: September 2017; Revision requested: January 2018; Accepted: June 2018

The authors have stated they have no conflict of interest.

This is an open access article under the terms of the Creative Commons Attribution-NonCommercial-NoDerivs License, which permits use and distribution in any medium, provided the original work is properly cited, the use is non-commercial and no modifications or adaptations are made.

Aust NZ J Public Health. 2018; 42:582-7; doi: 10.1111/1753-6405.12819

numbers of interest were item 110 (initial consultation) and item 116 (subsequent consultation in the same course of treatment) with a consultant general paediatrician following a referral.<sup>3</sup> We also analysed item 132 (initial assessment and management plan of a patient with multiple morbidities, lasting at least 45 minutes), item 133 (review of management plan for a patient with multiple morbidities, lasting at least 20 minutes), and item 135 (initial assessment, diagnosis and treatment and management plan for autism or any other pervasive developmental disorder [PDD]).<sup>3</sup>

The data provided by DHS included the number of initial and subsequent outpatient general paediatric consultations between 1 January 2011 and 31 December 2014 for which a claim for benefit was rendered. These included separate data on the absolute number of bulk billed versus non-bulk billed visits. The data included the mean, median, and 10th and 90th percentile of actual fees for non-bulk billed claims rendered between 1 April 2011 and 31 December 2014 and were aggregated by state/territory of the paediatrician providing the service. Prior to being released to the research team, the data file was reviewed by the Department of Health. To prevent the potential identification of any specific providers through the data, DHS imposed the suppression of data in instances where there were fewer than 20 services provided in a specific specialty in a state or territory.

We calculated service use per 100,000 children (aged 0 to 14 years), based on the 2014 Australian Bureau of Statistics population estimates grouped by age and state/territory.<sup>11</sup> We calculated how changes in fees related to the national rate of inflation using the 'Inflation Calculator' available on the Reserve Bank of Australia's website.<sup>12</sup>

This study received ethics approval from the University of Melbourne Human Research Ethics Committee.

## **Results**

#### Service Use

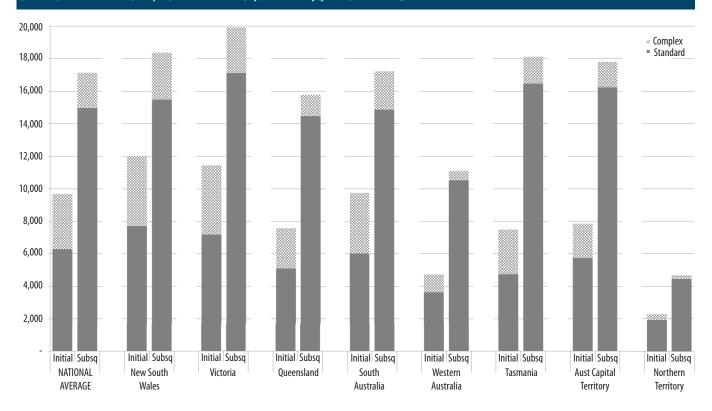
Nationally in 2014 there were 278,193 general paediatric standard initial consultations (item 110) with roughly no change from 2011. There were 661,641 general paediatric standard subsequent consultations (item 116), down 1.7% from 2011. However, the visit volumes for complex consultations showed significant increases. Nationally in 2014, there were 150,110 general paediatric complex initial consultations (item 132), an increase of 32.9%

from 2011; and 95,329 general paediatric complex subsequent consultations (item 133), an increase of 33.6% from 2011. In 2014, there were 8,561 initial autism/PDD consultations (item 135) by general paediatricians, up 5% from 2011. These figures include bulk billed and non-bulk billed visits.

Use of the item codes for complex consultations (132 and 133) relative to the codes for standard consultations (110 and 116) varied around the country. For initial consultations in 2014, the proportion of paediatric consultations using the complex code (132) varied from a low of 15.6% in the Northern Territory, to a high of 38.3% in South Australia. For subsequent consultations, the proportion of consultations using the complex code (133) varied from 5.2% in both the Northern Territory and Western Australia, to 15.7% in New South Wales, see Figure 1.

In 2014, there was state/territory variation in the ratio of subsequent consultations to initial consultation. With standard and complex consultations combined, New South Wales had the lowest rates of subsequent consultations with 1.5 per initial consultation. All other areas had more than 1.7 subsequent consultations per initial consultation, with Tasmania having the highest rate at 2.4 per initial consultation.

Figure 1: Number of initial general paediatric consultations (standard, Medicare item 110; complex, Medicare item 132) and subsequent general paediatric consultations (standard, Medicare item 116; complex, Medicare item 133) by State/Territory (per 100,000 children); 2014.



Freed and Allen Article

# Service use relative to state/territory child population

To account for variation in population across the states and territories, the service usage data for 2014 was analysed relative to the number of children (aged 0-14 years) in each geographic area. The per capita number of initial paediatric consultations (110 and 132) in those states with the highest service use (New South Wales and Victoria) was more than double that of the states with the lowest service use (Western Australia and the Northern Territory). The number of subsequent paediatric consultations (116 and 133) per 100,000 children in the Northern Territory was less than half that of any other state, and less than one-quarter of the state with the highest subsequent consultation service use (Victoria), see Figure 1.

#### Rate of bulk billing

The proportion of all standard initial consultations (item 110) bulk billed increased from 34.3% in 2011 to 36.3% in 2014.
The percentage of standard subsequent consultations (item 116) bulk billed also increased across this same time interval from 31.8% to 33.9%. The proportion of all complex initial consultations (item 132) bulk billed decreased from 52.3% in 2011 to 51.2% in 2014. The percentage of complex subsequent consultations (item 133) bulk billed also

decreased across this same time from 49.7% to 47.5%. The proportion of autism/PDD consultations (item 135) bulk billed increased from 51.4% in 2011 to 53.2% in 2014.

Further analysis of the 2014 data (standard and complex consultations combined) revealed that the bulk billing rate varied across states/territories. The Northern Territory had the highest rate of bulk billing for both initial (58.4%) and subsequent (53.5%) consultations. Also noticeable was the low rate of bulk billing in Western Australia, for both initial (8.7%) and subsequent (8.8%) consultations (Figure 2). For autism/PDD consultations (item 135), bulk billing varied markedly from a low of 18.9% in Western Australia to a high of 77.3% in South Australia (Table 1).

# Fees for each consultation type

To illustrate actual out-of-pocket costs associated with consultations, only fees for the visits that were not bulk billed are presented in the following sections.

Fees for a standard initial consultation (item 110)

The 2014 national median fee for a standard initial general paediatric consultation was \$228.30. Of this amount, the patient received the Medicare benefit of \$128.30, resulting in a \$100.00 median out-of-pocket expense.

Queensland, Western Australia and the Northern Territory had the highest median fees, at \$250. Tasmania (at \$181.00) was the only state where the median fee was less than \$200. Tasmania also had the smallest range between the 10<sup>th</sup> and 90<sup>th</sup> percentile of fees (\$70.00). South Australia had the largest range of fees between the 10<sup>th</sup> and 90<sup>th</sup> percentiles (\$220.00), see Table 1.

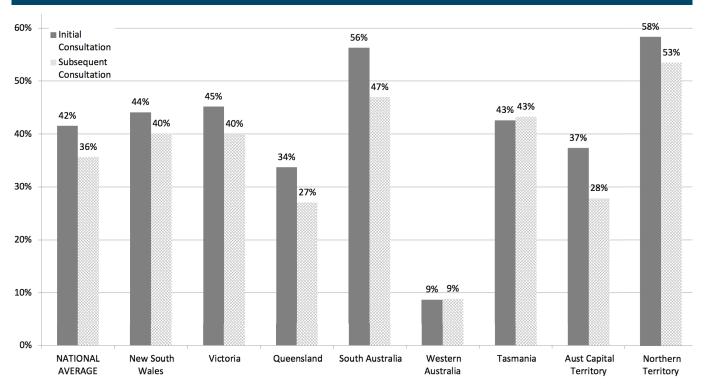
The national median fees for a standard initial consultation increased by 11.9% (\$204.00 to \$228.30; an increase of \$24.30) from 2011 to 2014. However, after accounting for the rate of inflation over these four years, the overall increase is approximately 4.7% (\$10.33) in 2014 equivalent dollars.

Fees for a complex initial consultation (item 132)

The 2014 national median fee for a complex initial general paediatric consultation was \$320.00. The patient received the Medicare benefit of \$224.35, resulting in a median \$95.65 out-of-pocket expense.

There was marked variation across states/ territories, in the mean, median and 10<sup>th</sup>/90<sup>th</sup> percentile of fees for a complex initial consultation. Western Australia had the highest median fees, at \$374.35. Tasmania (at \$269.35) was the only state where the median fee was less than \$300. Again, Tasmania also had the smallest range between the 10<sup>th</sup> and 90<sup>th</sup> percentile of fees (\$25.00). Queensland





had the largest range of fees between the 10<sup>th</sup> and 90<sup>th</sup> percentiles (\$185.65), see Table 1.

The national median fees for a complex initial consultation have increased by 8.5% (\$295.00 to \$320.00; an increase of \$25.00) from 2011 to 2014. However, after accounting for the rate of inflation, the overall increase is approximately 1.5% (\$4.79) in 2014 equivalent dollars.

Fees for a standard subsequent consultation (item 116)

The 2014 national median fee for a standard subsequent general paediatric consultation was \$105.25. Of this amount, the patient received the Medicare benefit of \$64.20, resulting in a median \$41.05 out-of-pocket expense.

There was variation across states/territories, with Western Australia having the highest median fees (\$120.00), and Tasmania having the lowest median fees (\$91.70). The Northern Territory had the smallest range between the 10<sup>th</sup> and 90<sup>th</sup> percentile of fees (\$38.20). New South Wales and Australian Capital Territory had the equal largest range of fees between the 10<sup>th</sup> and 90<sup>th</sup> percentiles (\$104.50), see Table 2.

The national median fees for a standard subsequent consultation increased by 7.4% (\$98.00 to \$105.25; an increase of \$7.25) from 2011 to 2014. However, after accounting for the rate of inflation, the overall median increase is approximately 0.5% (54 cents) in 2014 equivalent dollars.

Fees for a complex subsequent consultation (item 133)

The 2014 national median fee for a complex subsequent general paediatric consultation was \$180.00. The patient received the Medicare benefit of \$112.30, resulting in a \$67.70 median out-of-pocket expense.

There was variation across states/territories, with Australian Capital Territory having the highest median fees (\$230.00), and Tasmania having the lowest median fees (\$152.30). Tasmania and the Northern Territory had the equal smallest range between the 10<sup>th</sup> and 90<sup>th</sup> percentile of fees (\$15.00). Victoria had the largest range of fees between the 10<sup>th</sup> and 90<sup>th</sup> percentiles (\$112.70), see Table 2.

The national median fees for a complex subsequent consultation increased by 12.5% (\$160.00 to \$180.00; increase of \$20.00) from

2011 to 2014. After accounting for the rate of inflation, the overall median increase is approximately 5.3% (\$9.04) in 2014 equivalent dollars.

Fees for an autism or PDD assessment, diagnosis and treatment plan consultation (item 135)

The 2014 national median fee for an autism/PDD related consultation was \$305.00. The patient received the Medicare benefit of \$224.35, resulting in a median \$80.65 out-of-pocket expense.

There was marked variation across states/ territories, in the mean, median and 10<sup>th</sup>/90<sup>th</sup> percentile of fees for an autism/ PDD consultation. Australian Capital Territory had the highest median fees (\$410.00), and Tasmania had the lowest median fees (\$264.35). The Northern Territory had the smallest range between the 10<sup>th</sup> and 90<sup>th</sup> percentile of fees (\$15.00). Australian Capital Territory had the largest range of fees between the 10<sup>th</sup> and 90<sup>th</sup> percentiles (\$205.65), see Table 2.

The national median fees for an autism/PDD consultation increased by 5.1% (\$290.00 to \$305.00; increase of \$15.00) from 2011 to 2014. However, after accounting for the rate of inflation, the overall median fee actually decreased by 1.6% (\$4.86) in 2014 equivalent dollars.

Table 1: Doctor fees for an initial outpatient consultation (Medicare item 110 and 132) or initial autism/PDD consultation (Medicare item 135) with a general paediatrician; 2014.

Provider State	Item	Doveontono	Fee			
		Percentage bulk billed	Mean	Median	10th	90th
					percentile	percentile
NATIONAL AVERAGE	110	36.3%	\$239.00	\$228.30	\$150.90	\$320.00
	132	51.2%	\$332.00	\$320.00	\$260.00	\$420.00
	135	53.2%	\$322.00	\$305.00	\$250.00	\$400.00
New South Wales	110	37.7%	\$230.00	\$220.00	\$150.90	\$300.00
	132	55.6%	\$326.00	\$316.60	\$250.05	\$400.00
	135	63.7%	\$327.00	\$304.35	\$250.00	\$450.00
Victoria	110	42.5%	\$241.00	\$228.30	\$160.00	\$325.00
	132	49.8%	\$318.00	\$305.00	\$259.35	\$380.00
	135	46.0%	\$306.00	\$300.00	\$254.35	\$374.35
Queensland	110	28.0%	\$252.00	\$250.00	\$150.90	\$360.00
	132	45.5%	\$364.00	\$360.00	\$274.35	\$460.00
	135	50.3%	\$341.00	\$350.00	\$263.90	\$402.00
South Australia	110	51.2%	\$230.00	\$208.30	\$148.30	\$368.30
	132	64.4%	\$324.00	\$304.35	\$263.90	\$383.00
	135	77.3%	\$284.00	\$285.00	\$244.35	\$330.00
Western Australia	110	7.2%	\$252.00	\$250.00	\$178.30	\$303.30
	132	13.6%	\$373.00	\$374.35	\$294.35	\$450.00
	135	18.9%	\$334.00	\$301.35	\$250.00	\$450.00
Tasmania	110	43.3%	\$187.00	\$181.00	\$158.30	\$228.30
	132	41.4%	\$275.00	\$269.35	\$264.35	\$289.35
	135	64.5%	\$270.00	\$264.35	\$254.30	\$289.35
Australian Capital Territory	110	27.7%	\$229.00	\$230.00	\$150.90	\$330.00
	132	63.8%	\$342.00	\$315.00	\$275.00	\$410.00
	135	64.0%	\$366.00	\$410.00	\$224.35	\$430.00
Northern Territory	110	61.3%	\$250.00	\$250.00	\$182.05	\$290.00
	132	42.3%	\$328.00	\$342.95	\$274.35	\$349.35
	135	56.8%	\$282.00	\$274.35	\$274.35	\$289.35
				• • • • • • • • • • • • • • • • • • • •	• • • • • • • • • • • • • • • • • • • •	•

# Discussion

The most important finding from this study is the marked variation in fees and bulk billing rates both within, and between, states and territories. The significant increase in the number of initial and subsequent consultations using the complex consultation code for patients with multiple morbidities (items 132 and 133) is noteworthy. Also noteworthy is the low rate of real growth in both initial and subsequent consultation fees, after accounting for inflation.

The parents of children attending general paediatric consultations would not necessarily be aware that the fee charged by their doctor could differ from that charged by other doctors or, indeed, by how much it could differ. Further, no data exist on quality of outpatient general paediatric care, so parents would be unaware of the relative value of the private medical services their child is receiving for a greater fee. Other nations have programs to assess quality and inform patients, <sup>13</sup> but such information does not currently exist in Australia.

Freed and Allen Article

The national rate of bulk billing for general paediatric initial consultations is similar to that of many adult medical specialities. <sup>10</sup> The low rate of bulk billing for general paediatric consultations in Western Australia is consistent with many adult medical specialities in that state. <sup>10</sup> From our data, we are unable to assess why this pattern exists. It is possible that there is a greater investment in state-funded clinics in WA, relative to other states. If that is the case, there would be less of a need for bulk-billed services. Future studies should assess the variation in state investment and its impact on service use.

The significant increase in the number of general paediatric initial and subsequent consultations using the consultation codes for patients with multiple morbidities aligns with evolving service patterns in many adult medical specialties. <sup>14</sup> Consultants receive a 75% higher rebate on the item codes for complex consultations compared to that received for standard consultations. <sup>3</sup> The reasons for the increasing use of the item codes for complex consultations are beyond the scope of this study.

While general paediatric consultation fees increased slightly above the rate of inflation between 2011 and 2014, the rate of bulk billing increased for standard consultations and decreased for complex consultations over the same period. Bulk billing in the private outpatient sector is at the doctor's discretion. When more patients are being bulk billed, more do not incur out-of-pocket costs. However, trends show that those who do pay out-of-pocket are paying slightly higher fees. The concurrent trends may offset each other with regard to doctors' overall income.

The rate of increase in national median fees for all examined consultation types is lower than the rate of increase of other health care costs. Data from the Australian Bureau of Statistics shows that the overall cost of medical and hospital services rose by 22.2% during the years 2011–2014,<sup>15</sup> which is 15.4% above the rate of inflation.

Relative to their child population, some states/territories (e.g. the Northern Territory) had lower general paediatric consultation usage than others. Data from the Australian Health Practitioners Regulation Agency indicate that in 2014 there were 17 general paediatricians in the NT; fewer relative to child population than in any other state or territory. Hence, it is possible that the lower service usage may reflect limited access to general paediatrics care. However, there are concerns regarding the accuracy of workforce

paediatrician; 2014. Fee Percentage **Provider State** Item Mean Median 10th 90th bulk billed percentile percentile NATIONAL AVERAGE 116 33.9% \$116.00 \$105.25 \$75.50 \$170.00 133 \$240.00 47.5% \$188.00 \$180.00 \$145.00 New South Wales 116 38.4% \$123.00 \$180.00 \$110.00 \$75.50 133 \$220.00 49.2% \$187.00 \$180.00 \$145.00 Victoria 116 38.3% \$115.00 \$75.50 \$160.00 \$106.85 \$255.00 133 50.1% \$184.00 \$170.00 \$142.30 Queensland 116 25.8% \$113.00 \$100.00 \$75.50 \$150.05 133 40.7% \$196.00 \$185.00 \$156.00 \$240.00 South Australia 116 44 8% \$103.00 \$100.00 \$74.20 \$147.20 133 60.7% \$192.00 \$170.00 \$137.30 \$212.00

\$117.00

\$199.00

\$93.00

\$152.00

\$121.00

\$209.00

\$108.00

\$168.00

\$120.00

\$190.00

\$91.70

\$152.30

\$104.20

\$230.00

\$97.65

\$162.30

Table 2: Doctor fees for a subsequent outpatient consultation (Medicare item 116 and 133) with a general

data for paediatric medical specialists in Australia. <sup>17</sup> There may also be care rendered outside the Medicare system, such as state/ territory funded services, or Aboriginal and Torres Strait Islander specific services. Lower service usage in some regions may also reflect limited economic access. This could include difficulty paying out-of-pocket costs and/or limited access to a specialist who bulk bills.

116

133

116

133

116

133

116

133

8.4%

16.0%

44.9%

26.8%

28.5%

20.8%

53.4%

54.2%

The variation across states/territories in the ratio of subsequent consultations to initial consultations is unexplained by our data. It may be related to access issues, and/or systematic over-use or under-use of general paediatric consultations in certain regions. This may include the working practices of the specialists themselves, or of other health care professionals. It is unknown how the ratio of subsequent consultations seen in general paediatrics might relate to the relationship between paediatricians and general practitioners (GPs) in any given area.

#### Limitations

Western Australia

Northern Territory

**Australian Capital Territory** 

Tasmania

The current study is based on only outpatient general paediatric consultations for which a Medicare claim was filed. We do not have data on the volume of consultations outside the Medicare system, such as state-funded or Aboriginal and Torres Strait Islander services. As such, we are not able to analyse how the volume of state- or other-funded general paediatric consultations in a given state/ territory relates to private consultation fees and service use. Further, some of the general

paediatric consultations for which a Medicare claim is filed take place in public hospitals, in an effort to expand availability beyond state-funded clinical capacity. Traditionally, these consultations are bulk billed. There are no readily available data to determine what proportion of bulk-billed services follow this model

\$64.20

\$160.00

\$64.20

\$142.30

\$75.50

\$160.00

\$91.00

\$162.30

\$160.00

\$242.30

\$114.20

\$157.30

\$180.00

\$240.00

\$129.20

\$177.30

#### Conclusion

There are very few reports regarding the actual manner in which the health care system in Australia functions. Greater understanding of the way in which health services are provided will assist both the public and policymakers in making evidencebased decisions about the Australian health care system. The wide variation in out-of-pocket costs for general paediatric consultations is not explained by variation in quality of care provided, as data to make such a determination do not exist. Understanding the reasons for the differences in fees and bulk billing rates across states/territories, and for the significant increase in the number of complex consultations (for patients with multiple morbidities), may assist decision making that could potentially increase access to paediatric care. Additional exploration of the variation in the number of subsequent consultations is also warranted; for example, consideration of appropriateness of subsequent consultations, particularly where ratios of subsequent to initial consultations are anomalous.

#### References

- Department of Health and Human Services. Specialist Clinics Activity and Wait Time Report: March Quarter 2015-16: Preliminary. Melbourne (AUST): State Government of Victoria: 2016.
- Medew J. Victorians Waiting More than Four Years to See a Public Hospital Specialist [Internet]. The Age. 2016 [cited 2016 May 9]. Available from: http://www.theage. com.au/victoria/victorians-waiting-more-than-four-years-to-see-a-public-hospital-specialist-20160201-gmiyr2.html
- Department of Health. Medicare Benefits Schedule Book: Operating from 01 January 2014. Canberra (AUST): Government of Australia; 2013.
- Cheng TC, Scott A, Jeon SH, Kalb G, Humphreys J, Joyce C. What factors influence the earnings of general practitioners and medical specialists? Evidence from the medicine in Australia: Balancing employment and life survey. Health Econ. 2012;21(11):1300-17.
- Healy J, Sharman E, Lokuge B. Australia: Health system review. Health Syst Transit. 2006;8(5):1-158.
- Russell L. Too high: Specialist fees hit the sickest patients [Internet]. The Sydney Morning Herald. 2015 [cited 2016 May 6]. Available from: http://www.smh.com. au/comment/too-high-specialist-fees-hit-the-sickestpatients-20151124-gl6ess.html
- Colombo F, Tapay N. Private Health Insurance in Australia: A Case Study [Internet]. Paris (FRA): OECD Publishing; 2003 [cited 2016 May 6]. Available from: http://www.oecd.org/australia/22364106.pdf
- Elliot A, Hancock N. Health Legislation Amendment (Medicare and Private Health Insurance) Bill 2003. Bill Digest No.: 176 2002-03. Canberra (AUST): Department of the Parliamentary Library Bills Digest Service Information and Research Services; 2003.
- Kunin M, Allen AR, Nicolas C, Freed GL. Private general paediatric care availability in Melbourne. Aust Health Rev. 2017:41(1):63-7.
- Freed GL, Allen AR. Variation in outpatient consultant physician fees in Australia by specialty and state and territory. Med J Aust. 2017;206(4):176-80.
- Australian Bureau of Statistics. 3235.02014-Population Estimates by Age and Sex, Summary Statistics (ASGS 2011) [Internet]. Canberra (AUST): ABS; 2015 [cited 2017 Jan 10]. Available from: http://www.abs.gov.au/AUSSTATS/ abs@.nsf/DetailsPage/3235.02014?OpenDocument
- Reserve Bank of Australia. Inflation Calculator [Internet]. Canberra (AUST): Reserve Bank; 2016 [cited 2016 Jun 23]. Available from: http://www.rba.gov.au/calculator/
- Martin LA, Nelson EC, Lloyd RC, Nolan TW. Whole System Measures: IHI Innovation Series White Paper. Cambridge (MA): Institute for Healthcare Improvement; 2007.
- Freed GL, Allen AR. Outpatient consultant physician service usage in Australia by specialty and state and territory. Aust Health Rev. 2017. doi: 10.1071/AH17125.
- Australian Bureau of Statistics. Table 8. CPI: Analytical Series, Weighted Average of Eight Capital Cities [Internet] Canberra (AUST): ABS; 2016 [cited 2016 Jul 1]. Available from: http://www.abs.gov.au/AUSSTATS/abs@.nsf/ DetailsPage/6401.0Mar%202016?OpenDocument
- Australian Health Practitioner Regulation Agency. *Annual Report 2013/14*. Melbourne (ASUT): AHPRA; 2014.
- Allen AR, Doherty R, Hilton A, Freed GL. Inconsistencies in authoritative national paediatric workforce data sources. Aust Health Rev. 2017:41(6):688-692.